

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

**SUBJECT:** EPA Region III Air Monitoring  
Program FY 2006 Issues & Priorities

November 14, 2005

**FROM:** Walter K. Wilkie, Chief, Air Quality Analysis Branch, Air Protection  
Division

**TO:** Participants in the November 2005 MARAMA Air Monitoring Workshop

Due to a conflict in schedules, I will not be able to attend this year's air monitoring workshop to discuss with you the issues and priorities facing the regional air monitoring program in FY 2006. However, the information attached to this memorandum briefly captures many of the topics that I planned to cover during the workshop. In light of the various funding and programmatic changes that will affect the national ambient air monitoring program beginning in FY 2006, Region III will continue to be proactive in its efforts to ensure that our regional air monitoring programs receive adequate funding in order to address our region's unique air quality issues. If there are any questions relative to this information, please feel free to contact me at (215)814-2150 or via email at [wilkie.walter@epa.gov](mailto:wilkie.walter@epa.gov). You may also contact members of my air monitoring staff for questions or additional information.

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PM2.5 Speciation Filter Analysis Program  
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(BioWatch)  
PM2.5 Performance Audit Program (ESAT)  
Regional Air Toxics Monitoring Program  
Air Monitoring Emergency Response Contact  
O3 Fast Track Reporting  
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Vic Guide (215) 814-2733: Performance Audit/Site Inspection for SLAMS/NAMS  
SLAMS/NAMS Air Monitoring Equipment Needs  
SLAMS/NAMS Network Reviews  
Technical Systems Audits  
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Pamela Hargett (215) 814-2716: AIRS-AQS Database Management/Technical support  
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## EPA Region III Air Monitoring Program FY 2006 Issues & Priorities

- Regulatory Changes Under 40 CFR Part 58
- Section 103 Grant Funds (PM2.5, CASTNET, PAMS)
- Optimizing the Region's PM2.5 Monitoring Network
- Regional Air Toxics Monitoring Program
- Homeland Security Air Monitoring Activities

### Regulatory Changes Under 40 CFR Part 58

EPA is preparing a Notice of Proposed Rulemaking (NPR) to be signed by the EPA Administrator by 12/05. The NPR will propose amendments to the current ambient air monitoring and quality assurance requirements of 40 CFR Part 58. The proposed amendments will also establish ambient air monitoring requirements in support of the proposed revisions to the PM NAAQS (PM Coarse), and will include revisions to 40 CFR Part 53 to address testing procedures and criteria matter methods. Please see Attachment #1 for a brief summary of some of the proposed amendments. EPA believes that the proposed amendments will result in a more integrated monitoring network that places an emphasis on the collocation of several pollutant measurements to support multi-pollutant air management strategies, and increases the deployment of advanced continuously reporting measurement systems to support reporting efforts to the public and provide more insightful highly time-resolved data.

National Ambient Air Monitoring Strategy (NAAMS)-The April 2004 final draft of the NAAMS will be updated to reflect the amendments in the NPR. A new version of the NAAMS should be available in 12/05. Important aspect relative to the NAAMS is EPA's FY 06 funding strategy for the PM2.5 monitoring program, and the investments/disinvestments targeted for the program in FY06. Due to the unique PM2.5 air quality issues affecting our region, we have and will continue to be proactive in our efforts to ensure adequate funding for our regional PM2.5 programs.

Once the NPR is announced, EPA-Region III will begin the process of evaluating the impact of the proposed amendments relative to our regional air monitoring networks and programs. We will schedule meetings and/or conference calls with each State and local agency to discuss how these amendments affect your agency's air monitoring program.



## Section 103 Grant Funds (PM2.5, CASTNET, PAMS)

For the past few years, the PM2.5 program has been funded annually at approximately \$42.5 million, and funding reductions for the program will occur in FY 06 and are anticipated in FY 07. Nationally, the reduction to the FY 06 allocations are a result of the significant amount of unexpended funds that Regions have been carrying over from year to year from 1999-2003. For FY 06 and beyond, EPA-HQ will be placing a stronger emphasis on grants management for the program and will monitoring state and local activity relative to the drawing down of grant funds very closely.

In FY 06, \$3.5 million in Section 103 funds (normally allocated to State/local agencies) were shifted in order to fund upgrades to approximately 25% of the existing Clean Air Status and Trends Network (CASTNET) sites in order to meet NCore Level 2 specifications. As stated above, funding shifts were achieved by reducing the FY 06 funding allocation to Regions that had a significant amount of unexpended carryover funds from CY 1999-2003. In FY 04, EPA-Region III resolved our Section 103 funding matters, and by doing so, minimized the impact of the aforementioned funding shift on our Region's PM2.5 monitoring programs. Our actions in FY 04 resulted in the need to make further adjustments in funding for FY 05 by reducing the number of FRMs operated by the State and local agencies by 10%. However, our proactive accounting measures had a minimal impact on State and local PM2.5 programs, and enabled Region III to maintain comparable funding levels (approx. \$2.6 million) between FY 05 and FY 06. This is not the case nationally where some regions are now faced with significant reductions in funding for FY 06 due to their failure to resolve matters related to unexpended carryover Section 103 funds. Region III will continue to be proactive relative to funding matters associated with the regional PM2.5 monitoring program, and will be working closely with many of our State and local agencies on issues and matters specific to their monitoring programs.

PAMS Update - In the March 2005 draft version of the National Program & Grant Guidance, EPA stated that, in FY 06, \$1million in Section 105 funds would be shifted from the PAMS program to support quality assurance activities under the National Performance Audit Program (NPAP) and national/regional scale data analysis. The draft version of the grant guidance also stated that all of the \$1million would be administered by EPA. In the April 2005 final version of the grant guidance, EPA stated that shift in Section 105 funds from the PAMS program would begin in FY 07 with \$1million in funds being redirected in FY 07, and an additional \$1million in FY08. All or a portion of these funds would be used to support: (1) independent monitoring QA audits of non-PM2,5 NAAQS pollutant monitoring sites, and (2) national/regional scale data analysis of data from the non-PM2.5 monitoring programs. To date, no decision has been made regarding how much of these funds should be used for the aforementioned purpose or how these funds should be managed to meet the agency's goals.

## Optimizing the Region's PM2.5 Monitoring Network

As a part of the early work on the NAAMS, assessments of the regional ambient air monitoring networks were conducted in order to facilitate decision making relative to which PM 2.5 monitoring sites should be retained and where investments and/or disinvestments should be made. EPA's FY 06 funding strategy for PM2.5 focuses on certain programmatic investments and disinvestments that have affected funding levels for State and local agencies nationally. (Please see Attachment # 2 for a detailed description).

Due to the unique PM2.5 air quality issues affecting our region, many of the objectives of the Agency's FY 06 funding strategy cannot be met. As a result of a program funding shortfall in FY 05, and in order to ensure adequate funding levels for State/local programs in FY06, Region III made adjustments to the PM2.5 Section 103 grant funds by reducing each State and locals FRM network by 10%. This reduction in FRMS enabled Region III to allocate FY 06 funds for the PM2.5 program at close to the same level of funds provided in FY 05. However, due to the investments/disinvestments referenced above, it is anticipated that funding (over the next few years) for the PM2.5 program will not increase beyond the levels established in FY06.

Currently, Region III is in the early stages of a study that focuses (via air modeling analysis) on the current design of the region's PM2.5 monitoring network and programs related to the network in order to optimize the network so that the objectives of the FY 06 funding strategy and future strategies are addressed while minimizing the affect of any potential funding changes on the integrity of the Region III State and local PM2.5 air monitoring programs. We are currently working with the Philadelphia Air Management Services on the first phase of our PM2.5 optimization study, and will be scheduling conference calls and meetings with the remaining Region III State and local agencies

## Regional Air Toxics Monitoring Program

The regional cooperative air toxics monitoring program has been in place since 2001, and to date, all monitoring stations included in this program are operational and data is being reported to AIRS-AQS. Activities relative to the community-based and regional air toxic monitoring projects have or will be coming to a close by the end of this calendar year. In FY 06, Region III will be evaluating activities and efforts relative to air toxics monitoring program. Include in this evaluation will be (among other things) the data collected and reported to AIRS-AQS as well as the level of analytical support needed to support the program.

## Homeland Security Air Monitoring Activities (BioWatch)

In FY 06, EPA will begin the process of enhancing and expanding its air monitoring efforts relative to the Agency's homeland security activities. In 2005, BioWatch monitoring program enhancements and expansions commenced for selected cities across the country. Region III's air monitoring staff will continue to work with the Region's Superfund program on its effort to develop a consequence management plan that will support response activities in the event of an actual bio-terrorism episode. Additionally, Region III will work with involved State agencies to begin the process of preparing for anticipated expansions to the program which will include, among other things, monitoring at "special events" such as holiday and major sporting events.

## ATTACHMENT #1

### Revisions to Ambient Air Monitoring Regulations

EPA is preparing a Notice of Proposed Rulemaking (NPR) to be signed by the EPA Administrator by 12/05. The NPR will propose amendments to the current ambient air monitoring and quality assurance requirements of 40 CFR Part 58. The proposed amendments will also establish ambient air monitoring requirements in support of the proposed revisions to the PM NAAQS ( PM Coarse), and will include revisions to 40 CFR Part 53 to address testing procedures and criteria for candidate Federal Equivalent Method (FEM) continuous fine particulate matter methods. A brief summary of some of the proposed amendments is provided below. EPA believes that the proposed amendments will result in a more integrated monitoring network that places an emphasis on the collocation of several pollutant measurements to support multi-pollutant air management strategies, and increases the deployment of advanced continuously reporting measurement systems to support reporting efforts to the public and provide more insightful highly time-resolved data.

**NCORE** - Establishment of National Core Network (NCORE) – Under the proposed amendments, the existing NAMS and SLAMS would be replaced with NCORE. EPA anticipates that (nationally) approximately 70-100 NCORE Level 2 sites will be established with the capability of measuring PM<sub>2.5</sub>, PM<sub>10</sub>, O<sub>3</sub>, SO<sub>2</sub>, CO, NO/NO<sub>y</sub> and basic meteorology. Some NCORE sites will also measure O<sub>3</sub> precursors, PM<sub>2.5</sub> chemically speciated data, or other air toxic pollutants.

**Reporting and Data Certification** – To enhance timely reporting of certified data for analysis of recent air quality events and reports to the public, the amendments will include a phased approach to speed up official reporting and certification of air quality data. At present, State and local agencies have 90 days after the end of each quarter to report data to AIRS-AQS. EPA proposes to reduce this from 90 to 60 days beginning on 1/1/07, and to 45 days beginning on 1/1/09. EPA believes that taking this gradual approach toward reducing the delay between data collection and data reporting is both reasonable and within the capabilities of most State and local agencies. Additionally, EPA proposes to move the annual data certification from 7/1 to 5/1.

**Minimum Number of Monitors Required** - Modifications to the requirements for the number of monitors necessary to support current ambient air data objectives would be proposed. The amendments would allow for reductions in air pollution monitoring for select pollutants in geographic areas that do not have or are not expected to have related air quality problems, while increasing or maintaining monitoring sites in areas with continuing or new air quality problems. Reductions in the SO<sub>2</sub>, CO, NO<sub>2</sub>, and PM<sub>10</sub> networks will be allowed in geographic areas with historically low concentrations of these specific pollutants. The current O<sub>3</sub> and PM<sub>2.5</sub> networks, for the most part, will remain in place. However, alternative PM<sub>2.5</sub> methods will be promoted. The PAMS network will remain a requirement for serious, severe, and extreme O<sub>3</sub> nonattainment

areas; however, EPA is promoting the development of more individualized PAMS networks to suit the specific data needs for a PAMS area.

**Network Assessments** – In addition to the required annual network reviews, EPA proposes to require periodic and detailed network assessments as a means to maintain relevancy of the air monitoring data collection to emerging air program needs and scientific findings. State and local agencies will be required to conduct a technical network assessment every 5 years to consider whether monitoring sites should be removed or added, or whether new program elements should be adopted to account for changes in air quality, population growth, emission factors, and other parameters.

## ATTACHMENT # 2

Below is a brief summary of the PM2.5 Investments & Disinvestments as propose in the final draft NAAMS (dated 4/04).

### INVESTMENTS

**1. Increase in the Number of Continuous PM2.5 Monitors** - The size of the continuous PM2.5 monitoring network is expected to grow as NCore is implemented, as FRMs are replaced by approved continuous monitors, and as EPA and State/local agencies increase support of real time data reporting and forecasting of the AQI across the country. EPA-Headquarters anticipates that the operations budget for this category will increase as well.

**2. Trace Gas Analysis for CO, SO2, & NOx/NOy to Support Characterization of PM2.5 Precursors** – In FY 06, gas monitoring with high sensitivity for CO, SO2, & NOx/NOy will be continued to be deployed to support PM precursor characterization. In FY 05, and with the use of previous years carryover funds, resources were provided maintain and operate (22) pilot sites. In FY 06, funds will be used to establish additional sites to transfer these technologies to a wider audience of State and local agencies. The (22) pilot sites and the additional sites added in FY06 will serve as the first phase of the NCORE 2 implementation. There is a pilot site currently operating in Region III (Beltsville, MD), and its is anticipated that a second pilot site may be established in the western portion of Pennsylvania, but it is not clear at this time if this will occur in FY 06.

**3. Improving Data Management Systems** - According to the NAAMS, FY 06 grant allocations should also be used for data management system improvements in order to support timely reporting of air quality data from continuous monitors, continuous speciation monitors, and precursor gas monitors. EPA-Headquarters will work with Regions to determine (within its regional allocation) which State/local agency will need these additional resources to process, validate, & report their data in support of the PM monitoring program.

**4. National & Regional Level Analyses of PM Monitoring Program Data**- EPA will continue to work with State and local agencies to identify priorities for national/regional level analyses of PM data. The goal here is to assess the adequacy of the network in meeting its objective of supporting the air program, and to recommend changes to optimize that support. Portion of Section 103 funds will be used for contractor support. Data analysis specific to the design of local control programs and to tracking their implementation and effects is not included in this effort, and instead should be conducted with funds allocated for SIP development and implementation.



**5. Stronger Emphasis on Quality Assurance-Related Activities** - In past years, EPA-Headquarters has provided approximately \$2 million in Section 103 funds for QA activities. This has included both QA oversight of labs and the temporary placement of co-located monitors for comparison to State/local monitors (i.e. performance evaluation program audits). In FY 06, these activities will continue and will be coordinated with Thru-the-Probe (TTP) field audits and QA activities for NAAQS gases and lead monitoring sites. Contractor support in Regions with TTP capabilities will be able to make better use of their time in the field by conducting both PEP and TTP audits during the same visits. The aforementioned is consistent with NAAMS QA strategy.

## **DISINVESTMENTS**

**1. Decrease in the Number of Filter-Based FRM Sites** – Implementation of the NAAMS is expected to result in a decrease in the number of required filter-based FRM monitoring sites. In many cases, redundant (low value) urban sites or other sites where the measured PM level is substantially below the NAAQS and a PM2.5 continuous monitor is operational and located in the same general area of the monitor. As a result, there is an expected reduction in the cost of operating the FRM network in FY 06.

**2. Supplemental PM2.5 Speciation Sites Operated by State & Local Agencies** A select number of State operated supplemental speciation sites will be targeted for reduction in FY 06. This will result in savings in both O&M cost as well as contract lab and shipping cost. The NAAMS seeks a 50% reduction supplemental speciation sites at full implementation. In FY 06, (40) sites will be targeted for termination. This will leave sufficient sites operating to achieve the goals of the network. There are some areas that are expected to be in residual nonattainment for PM2.5 even after the national control strategies are implemented and/or that may have been attainment deadlines beyond 2009. In these cases, the Regional Office and the State (and where appropriate the local agencies) should reach agreement on the network design for the chemical speciation component of their PM2.5 monitoring network with the available allocation, as part of their annual network review.